



■ Model Name : PSDV121101A

■ Features :

- Suitable for LED lighting application
- UL8750/UL1012 Non Class 2
- For use in Dry and Damp Location
- Full-protection provided : OCP/OLP/OTP/SCP
- 0-10V Dimming Control
- Potting product



**SAMSUNG ELECTRO-MECHANICS CO., LTD**

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TEL: +82-31-210-5114, [www.samsungsem.co.kr](http://www.samsungsem.co.kr)

■ Electrical specification

| No. | Item                              | Min             | Typ  | Max  | Unit | Remark                              |
|-----|-----------------------------------|-----------------|------|------|------|-------------------------------------|
| 1   | Nominal Input Voltage             | 120             |      | 277  | Vac  |                                     |
| 2   | Wide Input Voltage                | 108             |      | 305  | Vac  |                                     |
| 3   | Maximum Input Current             |                 |      | 2    | Arms |                                     |
| 4   | Nominal Input Frequency           | 50              |      | 60   | Hz   |                                     |
| 5   | Wide Input Frequency              | 47              |      | 63   | Hz   |                                     |
| 6   | Power Factor (PF)                 | 0.9             |      |      |      | 1)                                  |
| 7   | Total Harmonic Distortion (THD)   |                 |      | 20   | %    | 1)                                  |
| 8   | Inrush Current                    | NEMA410         |      |      |      | 10)                                 |
| 9   | Earth Leakage Current             |                 |      | 500  | μA   |                                     |
| 10  | Output Voltage                    | 60              |      | 80   | Vdc  | 2)                                  |
| 11  | Output Voltage                    | 60              |      | 100  | Vdc  | 3)                                  |
| 12  | Output Current                    | 1425            | 1500 | 1575 | mA   |                                     |
| 13  | Output Current Ripple             |                 |      | 157  | mA   | 1)                                  |
| 14  | Output Peak Current               |                 |      | 3000 | mA   | 1)                                  |
| 15  | Output Aging Current Differential |                 |      | 75   | mA   | 2hr Aging                           |
| 16  | Turn-on Delay Time                |                 |      | 750  | ms   | 4)                                  |
| 17  | Electrical Efficiency             | 90              |      |      | %    | 5)                                  |
| 18  | Dimming Control                   | 10              |      | 100  | %    |                                     |
| 19  | Output Open LED Protection        | -               | -    | -    | -    | Auto-recovery                       |
| 20  | Output Short Circuit Protection   | -               | -    | -    | -    | Auto-recovery                       |
| 21  | Over-temperature Protection       | 105             |      |      | °C   | Auto-recovery                       |
| 22  | Case Temperature (Tc)             |                 |      | 85   | °C   | @Amb.50°C, Input 120Vac, Load(Typ.) |
| 23  | Storage Temperature               | -40             |      | 90   | °C   |                                     |
| 24  | Operating Temperature             | -40             |      | 50   | °C   |                                     |
| 25  | Insulation Resistance             | 100             |      |      | MΩ   | 500Vdc between Input & Output       |
| 26  | Differential Mode (Line to Line)  | -4              |      | 4    | kV   | 6)                                  |
| 27  | Common Mode (Line to Ground)      | -6              |      | 6    | kV   | 6) 7)                               |
| 28  | Contact Discharge Test Voltage    | -4              |      | 4    | kV   | 8)                                  |
| 29  | Air Discharge Test Voltage        | -8              |      | 8    | kV   | 8) 9)                               |
| 30  | Dielectric Withstand Voltage      | Input to Output | 3854 |      | Vac  | Apply for 1 minute<br>11)           |
| 31  |                                   | Input to Case   | 1554 |      | Vac  |                                     |
| 32  |                                   | Output to Case  | 500  |      | Vdc  |                                     |
| 33  | Vibration                         |                 |      | 3    | G    |                                     |
| 34  | Humidity                          |                 |      | 90   | %    |                                     |

☞ Application Notes

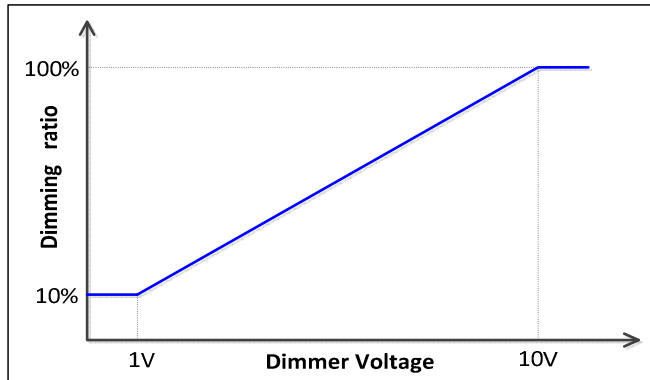
- 1) Test Condition: 120/277Vac 50/60Hz Input, LED Load\_80V, Ambient Temperature 25°C
- 2) Output Voltage of 60Vdc~80Vdc can be applied at Output Current 1500mA
- 3) LED load having Vf of this range can be driven until Vf drop to below 80V by self-heating.
- 4) Test Condition: Input voltage 277Vac 60Hz, Room Temperature, Cold start
- 5) Test Condition: 240Vac Input, 1hr Aging, LED Load\_80V, Ambient Temperature 25°C
- 6) Surge Specification above is higher than IEC/EN 61000-4-5 (Differential 1kV, Common 2kV)
- 7) The metal case of the LED driver must be connected with F.G
- 8) ESD Specification above meets IEC/EN 61000-4-2 Requirements (Contact 4KV, Air 8KV)
- 9) The metal case of the driver should be grounded.
- 10) Input 120Vac, < 144Apeak, < 0.7ms, < 41A2sec
- 11) Determined by Paragraph 8.4.2, UL8750, IEC/EN61347-1, IEC/EN61347-2-13

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#### ■ Dimming Curve

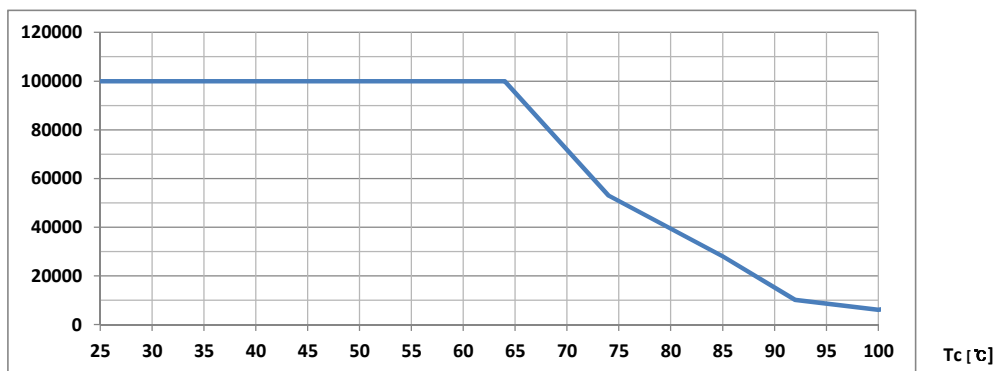


#### ☞ Safety Standards

Including safety requirements above, the LED driver complies with the following safety standards:

| No. | Item                              | Description                                         |
|-----|-----------------------------------|-----------------------------------------------------|
| 1   | UL8750                            | UL Safety Standards                                 |
| 2   | IEC/EN 61347-1, IEC/EN 61347-2-13 | IEC Safety Standards                                |
| 3   | EN 55015                          | Conducted and Radiated Emission Test                |
| 4   | IEC/EN 61000-3-2                  | Harmonic current emissions: Class C                 |
| 5   | IEC/EN 61000-3-3                  | Voltage Fluctuations and Flicker                    |
| 6   | IEC/EN 61000-4-2                  | Electrostatic Discharge (ESD): Contact 4kV, Air 8kV |
| 7   | IEC/EN 61000-4-3                  | Radio-frequency Electromagnetic Fields              |
| 8   | IEC/EN 61000-4-4                  | Electrical Fast Transients (EFT)                    |
| 9   | IEC/EN 61000-4-5                  | Surges: Differential 1kV, Common 2kV                |
| 10  | IEC/EN 61000-4-6                  | Injected Currents                                   |
| 11  | IEC/EN 61000-4-8                  | Power Frequency Magnetic Fields                     |
| 12  | IEC/EN 61000-4-11                 | Voltage Dips and Short Interruptions                |

#### ■ Life Time vs Tcase



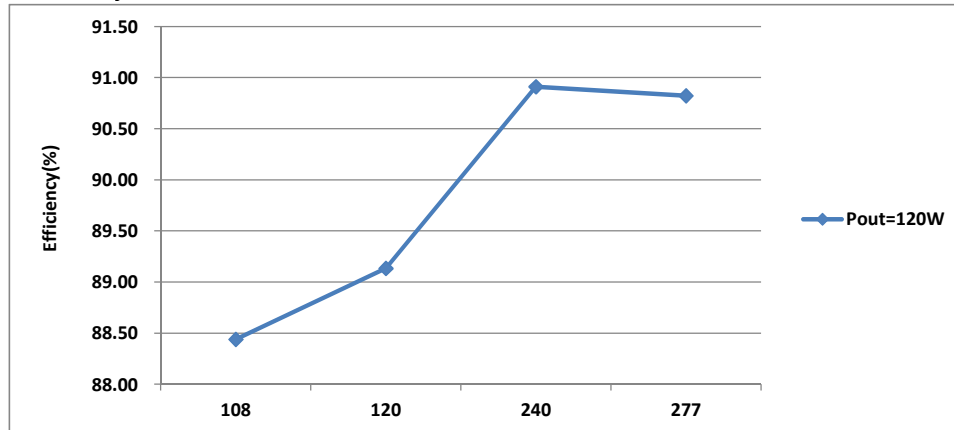
Remark) LED Driver has a rated lifetime of 50,000 hours @ T<sub>c</sub>≤75°C

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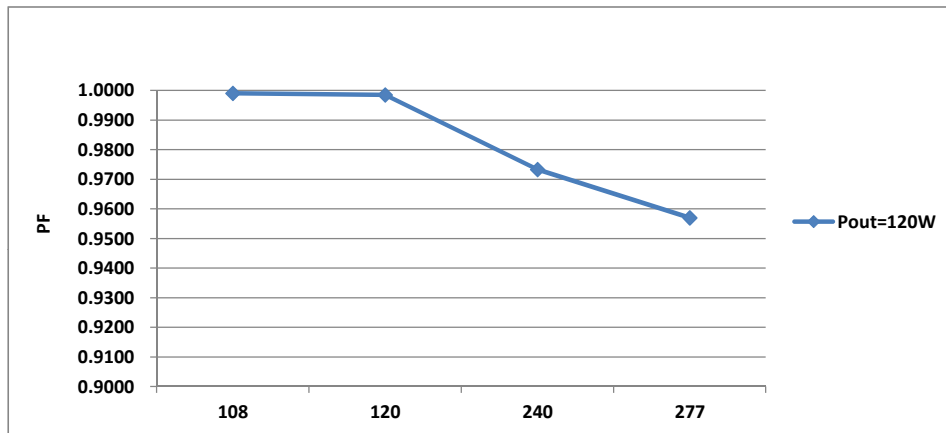
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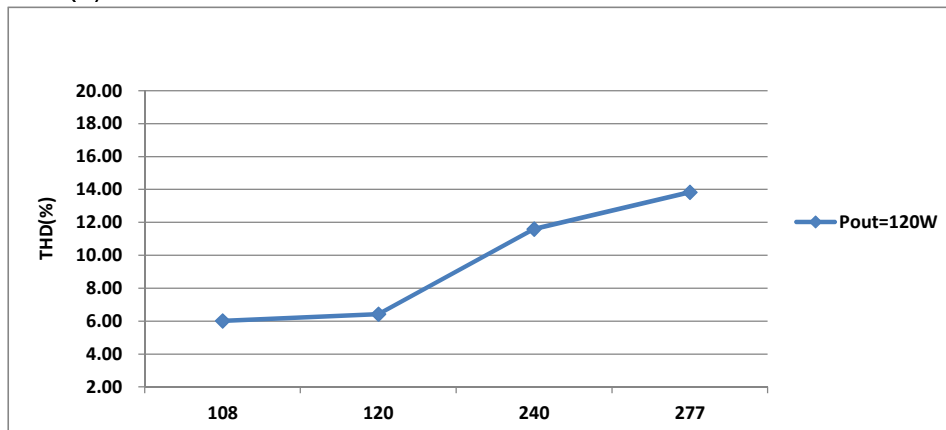
■ Efficiency(%)



■ Power Factor



■ THD(%)

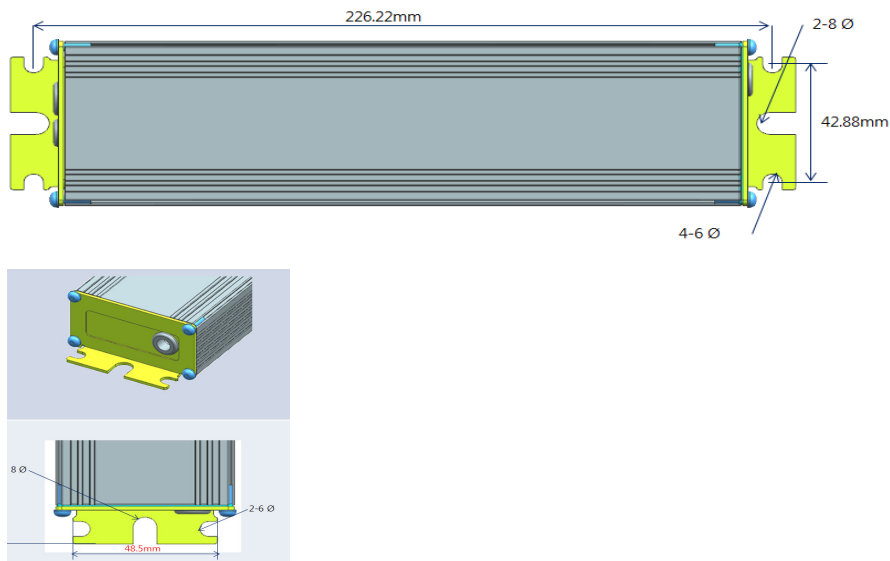


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## ■ Mechanical Specification

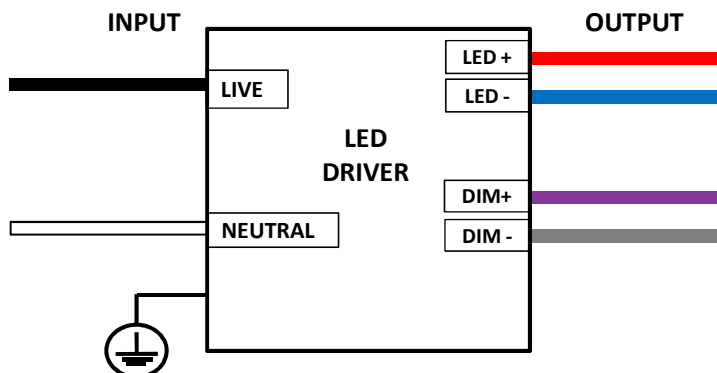


## ■ Enclosure Size

| Unit | Case Width | Case Length | Case Height | Mounting Width | Mounting Length | Overall Length |
|------|------------|-------------|-------------|----------------|-----------------|----------------|
| mm   | 60         | 211         | 32          | 42.9           | 226             | 240            |
| inch | 2.362      | 8.307       | 1.26        | 1.689          | 8.898           | 9.449          |

## ■ Case Material : Aluminium

## ■ Wiring Diagram



Remark) Output wiring specifications can be changed.

## ■ Rating label

**SAMSUNG**

INPUT : 120-277V~, 50/60 Hz, 150W, Max. 2 A, NPF=0.9  
 OUTPUT : 60-80V ~ / 1500mA(constant current type)  
 DIMMING CONTROL : Source & Sink Dimming  
 tc= 85°C

Made in China Dongguan SAMSUNG ELECTRO-MECHANICS

**LED Electronic Driver Model : PSDV121101A**

CAUTION :  
 Suitable for dry and damp locations.  
 Do not open the case, hazardous voltage inside.  
 Install in accordance with national and local electrical code.  
 This product is used for LED module only.

tc

**CULUS**  
E321686

**DIAGRAM OF INPUT/OUTPUT CONNECTION:**

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